Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Implementation of Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. 96-98
Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers	)	CC Docket No. 95-185

COMMENTS OF THE VERMONT PUBLIC SERVICE BOARD

May 25, 1999

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Certificate of Service

I, David C. Farnsworth, hereby certify that on this 25th day of May, 1999, copies of the foregoing comments of the state of Vermont Public Service Board were also served by first class mail, postage prepaid, to the following persons.

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Introduction

The Federal Communications Commission's ("Commission" or "FCC") fundamental purpose in soliciting these comments is to "refresh the record in this proceeding in order to identify those network elements to which incumbent local exchange carriers must provide nondiscriminatory access . . . ."[1] The Vermont Public Service Board ("Board" or "PSB") welcomes this opportunity to support the Commission in its efforts.

The Commission has requested comments on numerous issues associated with this Second Notice of Proposed Rule Making ("Second NPRM"). The comments below respond to the topics raised in the following paragraphs of the Second NPRM. They contain a discussion of (i) the complementary regulatory roles established under the Act for the Commission and the States (paras. 13-14); (ii) the appropriate application of the "essential facilities" doctrine (paras. 22-23); (iii) the "necessary and impair standards[2] (paras. 15-21, 29-31); (iv) implications of the availability of network elements outside an incumbent local exchange company's network (paras. 24-28); and an Appendix discussing unbundling in Vermont Public Service Board Docket 5713.

I. THE COMMISSION SHOULD CONTINUE TO RECOGNIZE THAT STATES HAVE IN PLACE AND ARE DEVELOPING NETWORK ELEMENT UNBUNDLING REQUIREMENTS THAT ARE CONSISTENT WITH THE ACT AND COMPLEMENTARY TO COMMISSION EFFORTS. (PARAS 13-14)

Relying upon their own authority, states and their commissions have in place or are developing requirements designed to unbundle network elements of incumbent local exchange companies("ILEC" or "Incumbent").[3] The Commission has recognized this, and has indicated that its jurisdiction can and should complement that of the states.[4] This Board believes that this

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[1] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, *Second Further Notice of Proposed Rulemaking*, FCC 99-70 (1999), para. 4.

[2] Including the application of the term "proprietary" (para. 15).

[3] *See, e.g.*, Proposed decision of ALJ McKenzie, Cal. PUC in Rulemaking 93-04-003, Investigation 93-04-002, May 1999. *See also* Appendix for a discussion of Vermont PSB Docket 5713 including UNE goals, principles, bottleneck facilities, categories of elements, and evidentiary presumptions.

[4] *Second NPRM*, FCC 99-70, para. 14.

coordination will result in more effective implementation of the standards set forth in section 251(d)(2), and in the Commission's choice of which specific network elements the Commission should require ILECs to unbundle under section 251(c)(3).

Prior to the Supreme Court's holding in *AT&T Corp., et al. v. Iowa Utils. Bd. et al.*, (hereinafter, *Iowa*)[5] this Board concluded that federal law does not preempt state power to order ILECs to offer combined unbundled network elements to competitive local exchange companies ("CLEC" or "Competitors") and other telecommunications providers who request them.[6] Nothing in the *Iowa* decision diminishes the power of this Board to act in a manner consistent with the Act, as construed by the Commission. The Commission has also recognized this: "[U]nder our rules, the states have authority to impose additional unbundling requirements, pursuant to our interpretation of section 251(d)(2).[7] We do not propose to eliminate the states' authority to impose additional unbundling requirements, pursuant to the standards and criteria we adopt in this proceeding."[8]

While the *Iowa* decision makes it clear that the Commission has rulemaking authority with respect to the local competition provisions of the Act, the Court's decision does not limit the scope of the Act's savings clauses and does not expand the scope of the Act's preemption provisions. Read together, the Act's broad savings clauses and narrow preemption provisions

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[5] *AT&T Corp., et al. v. Iowa Utils. Bd. et al.*, 119 S.Ct. 721 (1999).

[6] Public Service Board Docket 5713, Order of 10/16/98; *see also* Docket 5713 1996 WL 757165 (Vt. P.S.B., May 29, 1996) No. 5713. While this Board has concluded that it has authority under Vermont law to direct incumbent LECs to recombine UNEs for CLECs, if the Board decides that such a step is appropriate, the Board, however, also decided that it lacked a factual record in Docket 5713 upon which to base such a conclusion. Consequently, the Board directed the Hearing Officer to take evidence and submit a proposed decision on this question.

[7] *Local Competition First Report and Order*, 11 FCC Rcd at 15641-42, paras. 281-83; 47 C.F.R. § 51.317. Although the Supreme Court's analysis of section 251(d)(2) may have a bearing on Rule 317, which allowed states to identify additional network elements for unbundling, the court did not directly address that role. The Commission has asked the Eighth Circuit for a voluntary remand of Rule 317 so that the Commission may consider it further in light of the Supreme Court's decision.

[8] *Second NPRM*, FCC 99-70, para. 14.

establish a *floor* beneath which State regulatory bodies may not go, but not a *ceiling* on State efforts to encourage competition.[9]

With respect to unbundling, the Supreme Court's decision to vacate Rule 319 does not limit the States' authority to impose unbundling requirements because, while the forthcoming FCC rule may list a set of elements that is either more or less expansive, the Act does not preempt this Board's requirement to unbundle these categories of elements.[10] If the forthcoming FCC rule sets a higher floor that requires RBOCs to unbundle additional elements, then RBOCs must make available the FCC's larger set of elements. If, instead, the FCC's rule establishes a lower floor that reduces the set of elements that incumbents are required to unbundle, then a State's unbundling requirements will be above the Act's floor and will remain intact. Regardless of the outcome of the FCC proceeding, then, State commissions will retain authority to require unbundling of the elements that they reasonably expect will promote competition and benefit consumers of telecommunications services. Thus, the framework devised by Congress prohibits States from restricting the set of unbundled elements required by the Act or by Commission rule, but provides for States to appropriately balance such various state telecommunications policies including economic efficiency, fairness, improved service, and creative product development.

In conclusion, this Board urges the Commission to continue to articulate and rely upon the complementary roles that it occupies with state commissions such as this Board in ensuring that incumbent local exchange companies make available unbundled network elements in a manner that will best promote a competitive telecommunications marketplace and, in the long run, benefit consumers of telecommunications services.

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[9] *See* section 261(b) of the Act, which preserves state regulations enacted prior to the Act, and section 261(c), which authorizes states to impose requirements on carriers for intrastate services, so long as the requirements are not, in either case, inconsistent with the Act.

[10] Prior to the passage of the Act, the Hearing Officer in Docket No. 5713 established the set of categories of elements that incumbent LECs in Vermont will be required to unbundle. This Board affirmed the Hearing Officer by order of Order of 5/29/96. *See* pages 19-21. See Appendix and the accompanying discussion of unbundling in Vermont PSB Docket 5713.

II. IN WORKING WITH THIS EMERGING MARKET FOR LOCAL EXCHANGE SERVICE, THE COMMISSION SHOULD NOT BE GUIDED SOLELY BY ANTITRUST PRECEDENTS AND THE "ESSENTIAL FACILITIES" DOCTRINE THAT WERE DEVELOPED IN MATURE AND COMPETITIVE MARKETS. (Paras. 22-23)

Rather than ruling, as a matter of law, that the limiting standard contemplated by Section 251(d)(2) of the Act is the "essential facilities" doctrine from antitrust jurisprudence, the Supreme Court, in the *Iowa* decision, found that "it may be that some other standard would provide an equivalent or better criterion for the limitation upon network-element availability that the statute has in mind."[11] The Court's decision not to adopt the essential facilities doctrine was appropriate. In this context it is especially significant that the Court refrained from doing so because the currently transitional market for local exchange services is not appropriately measured against antitrust standards nor is it the type of market appropriate for imposition of antitrust enforcement measures. The purpose of antitrust policy is to protect competition while a central purpose of the Act is to develop it.

Considering several other differences, we see the wisdom in the Court's resistence to outright adoption of these principles. Antitrust principles work on the assumption that rivalries in private markets are possible. Antitrust constraints are imposed upon private markets sparingly, only when absolutely necessary. They seek to promote competition through prohibitions on practices that impair rivalry. Finally, they involve enforcement and are generally applied ex post facto.

Industry regulation, on the other hand, assumes that private market pressures are inadequate and will continue to be so, and that government must supply the missing ingredients. In particular, the transition from regulation to competition contemplated by the Act, for example, involved Congress balancing relationships and imposing dissimilar duties on different market participants.[12] The Act is purposefully forward-looking and preparatory to competition; and because Congress made these decisions, it would be incorrect to now characterize the relationship

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[11] *Iowa*, at 734 (referencing P. Areeda & H. Hovenkamp, *Antitrust Law* at 771-773 (1996)).

[12] Section 251 of the Act imposes (a) general duties on each telecommunications carrier, (b) obligations of all local exchange carriers, and (c) additional obligations of incumbent local exchange carriers. One of these additional obligations is the duty to provide unbundled access to network elements.

between LECs and CLECs, in antitrust terms, *i.e.*, as a rivalry of equals that has somehow gone awry.

Applying the essential facilities doctrine to UNEs at this point would likewise mistakenly assume that LECs and CLECs are on equal footing. Consider several examples. Under antitrust law, an inability to duplicate a facility has been held as a sufficient test for determining an essential facility.[13] The Supreme Court, however, has held that under the Act, to compete in the local exchange market, ownership of facilities, i.e., "duplication" is not necessary.[14]

Under the Act, Congress requires LECs to unbundle in spite of legislatively creating an alternative way into RBOC networks in the form of resale. However, in an antitrust context, a competitor that has a resale alternative, but seeks to get network elements unbundled would be unsuccessful. For example, the Fourth Circuit found no violation of the essential facilities doctrine where a company denied "trackage rights"[15] to a competing railroad where the competitor could have purchased train service from the defendant railroad.[16] In other words, access to "unbundled" tracks was denied where access to a bundled services was available.

In conclusion, the Commission should be aware of the limited value to this proceeding that is provided by antitrust precedents and essential facilities doctrine.

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[13] In *MCI Communications Corp. v. AT&T*, 708 F.2d 1081 (7th Cir. 1983), for example, the Seventh Circuit held that a facility was not essential where a plaintiff could not demonstrate its inability, practically or reasonably, to duplicate a facility.

[14] *Iowa* at 730. In order for a violation of the essential facilities doctrine, found in Section 2 of the Sherman Act, to be shown four elements must be proven: (1) control by the monopolist of the essential facility; (2) the inability of the competitor seeking access to practically or reasonably duplicate the facility; (3) the denial of the facility to the competitor; and (4) the feasibility of the monopolist to provide the facility. *Laurel Sand & Gravel Inc. v. CSX Transport*, 924 F.2d 539, 544-45 (4th Cir.) *Cert. denied, 112 S. Ct. 64 (1991); see also MCI Communications v. American Telephone and Telegraph Co.*, 708 F.2d 1081, 1132-33 (7th Cir.), cert. denied, 464 U.S. 891(1983).

[15] *I.e.*, the right to run one's train over another company's tracks.

[16] *Laurel Sand & Gravel Inc. v. CSX Transport*, 924 F.2d 539, 544-45 (4th Cir.) *cert. denied*, 112 S. Ct. 64 (1991).

III. IN DEVELOPING THE "NECESSARY" AND "IMPAIR" STANDARDS, THE COMMISSION SHOULD RECOGNIZE THAT THERE ARE PRACTICAL ECONOMIC IMPEDIMENTS ASSOCIATED WITH ACCESSING REALISTIC ALTERNATIVES TO UNBUNDLED NETWORK ELEMENTS (Paras. 15-21)

Introduction

Various RBOC commenters appear to assume that (1) all relevant elements are "proprietary" and (2) that traditional antitrust, essential facilities doctrine fully informs the definition of "necessary" and "impair." Both assumptions are erroneous. In implementing Section 251(d)(2) on remand, the Commission is required to adopt a limiting standard for "necessary" and "impair" that is rationally related to the goals of the Act. This Board encourages the Commission, as it establishes the limiting effects of these standards, to be wary of the arguments of incumbents that would result in creating greater limitations on access to unbundled elements than is necessary.

"Proprietary," a Definition and Demonstration (Para. 15)

Under Section 251(d)(2)(A), access to network elements that are "proprietary" in nature must be provided only when "necessary." The Commission should require incumbents to demonstrate that an element is proprietary in order to better understand exactly which elements should fall into this category. In order to do this, the Commission can use as guidelines a test similar to that used under the Federal Rules of Civil Procedure for granting protective orders. Rule 26 of the Federal Rules allows a court to issue an order that protects a party from whom discovery is sought from having to reveal, *e.g.*, trade secret or other confidential research, development or commercial information.[17] Federal Courts, in reviewing requests for protective orders have relied upon the test established in *Zenith Radio Corporation v. Matsushita Electrical Industrial Co.*, 529 F.Supp. 866 (E.D.Pa. 1981) that requires affirmative findings to three questions:

1. Is the matter for which protection is sought a "trade secret or other confidential research, development, or commercial information which should be protected;"
2. Would disclosure of such information cause a cognizable harm sufficient to warrant a protective order; and

[17] F.R.C.P. 26(c).

3. Has the party seeking protection shown "good cause" for invoking the court's protection.[18]

Other criteria that the Commission could use for determining whether elements are in fact proprietary are:

1. Whether measures have been taken and continue to be taken to assure protection of the elements as proprietary;
2. Whether the proprietary claim has expired by its terms or has been waived or withdrawn; and
3. Information concerning the element is reasonably obtainable through other legitimate means without incumbent's consent.[19]

Defining "Necessary" (Paras. 16, 20-21, 29-31)

In narrowly defining the term "necessary," the Commission can better assure that unbundling requests for proprietary elements are, in fact, being made. The Commission, therefore, should assure competitive providers access to proprietary network elements (i) if access is **necessary for the competitor to get to the market**, and (ii) **if there are no substitutes for that element** available from an alternative source.

Nowhere does the Act contemplate a would-be competitor having to prove that an entire market can be opened without access to a certain proprietary element. Congress has provided for CLECs a means of accessing incumbent local networks; it does not require that a CLEC demonstrate whether or not market-wide competition exists for that element before gaining access to it. Nor does it require the CLEC to show that it cannot somehow duplicate a "functionality" available through the network through the use of some other means. The "necessary" standard explicitly concerns access to "elements" and not to "functionalities," a broader and more vague concept.[20]

Defining "Impair" (Paras. 17, 20-21, 29-31)

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[18] *Zenith* at 889.

[19] *See generally* Vermont PSB Docket No. 4813-B, Order of 11/27/91 at 17-18

[20] *Iowa* at 732.

Under Section 251(d)(2)(B), no network element need be provided unless its unavailability would "impair" the ability of a telecommunications carrier seeking access to provide the services that it seeks to offer. In its discussion of the impairment standard, the majority opinion in the *Iowa* decision notes that the Commission must (a) consider the availability of elements outside an incumbent's network, and (b) also acknowledge that "any" increase in cost imposed by the denial of a network element is insufficient to satisfy the meaning of the terms. Therefore, the Commission will need to develop principles concerning (1) the appropriate degree of availability of alternatives to UNEs, (2) a sense of an appropriate geographic scope for its determination of availability, (3) an understanding of the relative costs of alternatives, and (4) and a sense of the availability of alternative elements relative to comparable UNEs.

IV. IN DETERMINING THE "SCOPE OF AVAILABILITY" OF ALTERNATIVES TO UNBUNDLED NETWORK ELEMENTS, THE COMMISSION SHOULD, AT THE VERY LEAST, BE GUIDED BY THE IMPLICATIONS OF THE "SCOPE OF A DENIAL" OF THOSE VERY ELEMENTS TO COMPETITORS, *I.E.*, IF A SMALL PART OF AN INCUMBENT'S SERVICE TERRITORY IS USED TO JUSTIFY A CONCLUSION THAT THERE IS COMPETITION AND ALTERNATIVES TO NETWORK ELEMENTS AVAILABLE TO COMPETITORS, THEN THE INCUMBENT CAN INAPPROPRIATELY DE-LIST A NETWORK ELEMENT AND DENY ACCESS TO IT ON A TERRITORY-WIDE BASIS (Paras. 24-28)

First, in determining whether alternative sources for network elements are reasonably available from other sources, the Commission should **not** be guided solely by antitrust precedents based upon "essential facilities"doctrines in mature competitive markets. As the discussion above demonstrates, antitrust precedents do not include many of the assumptions contained in the Congressional scheme devised in the Act. In practical terms, this means that the Commission's reliance on antitrust principles and precedents could systematically disadvantage potential telecommunications competitors by erroneously equating them to antitrust plaintiffs, who -- but for certain conditions in an already-competitive market -- are rivals on equal standing with other market participants.

In establishing its standards for unbundling, the Vermont PSB adopted the following definition for a "bottleneck" or essential facility: "(i) the input is essential to the supply of some other service; (ii) the service is exclusively supplied by the provider in question; and (iii) the provider and competitor compete with one another in the supply of some other service for which

the service in question is an essential input."[21] Additionally, this Board recognized that the standard of "exclusively supplied" should recognize the practical economic impediments associated with accessing realistic competitive alternatives; that is, the access to an alternative provider should not merely be a theoretical one, but a practical one as well.[22]

Geographic Scope

In considering availability of alternatives to network elements, this Board urges the Commission focus its inquiry upon an incumbent's entire service area, rather than on smaller subsets of the service area. In adopting its test for essential monopoly or bottleneck facility for the purposes of determining the network elements that should be unbundled, the Vermont Board agreed that "the standard should be met throughout the service area of a given service provider (or the relevant area to which the service obligation applies). That is, an obligation to unbundle should apply throughout a service area in which it is offered, if it remains a monopoly facility in a portion of that service area...."[23]

If an incumbent is allowed to deny access to any network element, it can do so for its entire service criterion, *i.e.*, the entire service area. The Commission should, therefore, assess the availability of alternatives using the same geographic area. In other words, if a company serves two LATAs, then availability of alternatives throughout the two should be the guide.

Cost of Alternatives

The Supreme Court found that "any" increase in cost imposed by the denial of a network element is insufficient to satisfy the meaning of the terms necessary and impair.[24] In so ruling, it established a "floor" to the rule that the Commission must fashion. On the other hand, it is reasonable to conclude that the cost of an alternative could lead a competitor to decide to not enter

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[21] Docket 5713, Order of May 29, 1996 at 16.

[22] *Id.*

[23] *Id.* at 17.

[24] *Iowa* at 271.

a market. Therefore, while cost differences can be minimal, and an insufficient basis for determining the meaning of impair, cost differentials can also be sufficiently significant to cause a substantial market barrier. One rule of thumb in regulated transactions, particularly security transactions, is that a change of five percent or more is presumed material.

Analysis of Alternatives

In addressing the availability of alternative supplies of network elements, the Commission has to be able to establish whether and to what degree changes in the market are occurring. Because competitive conditions may vary widely across product, service, and geographic markets, the Commission should develop a carrier-specific sense of the availability of alternatives network elements. From carrier-specific information -- including ratios of available alternative elements to incumbent elements -- a larger picture of the relative degree of competition in a service area can be ascertained.

In the Cable Communications Policy Act of 1992 ("Cable Act") and its regulations, Congress and the Commission have developed a framework in which to determine whether there is "effective competition" for the provision of cable services.[25] The parameters established in the Cable Act might provide the Commission with useful guidelines for analyzing the availability of alternative network elements.[26] The Cable Act , for example, adopts the "franchise area" as its geographic component.[27] The definition of "franchise area" in the Commission's cable regulations is further refined by other factors, including (1) a minimum number of distributors offering service to a (2) minimum percentage of households in the franchise area, and (3) the requirement that a minimum number of households subscribe to a distributor other than the largest

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[25] *See* 47 U.S.C. § 543(l).

[26] This Board stresses that this is merely a note of an analogous standard. Substantively, the availability of cable modem access to providers screened by cable companies is in no way a meaningful alternative to open access and choice of providers by end-users through the telecommunications network.

[27] *Id.* at § 543(l)(1)(B).

distributor.[28] The Cable Act also defines "effective competition" in terms of percentages of households to subscribe to service in a franchise area.[29]

Conclusion

In summary, the Vermont Public Service Board urges the Commission, in this proceeding, to do the following:

- Continue to recognize that states have in place and are developing network element unbundling requirements that are consistent with the act and complementary to Commission efforts;

- Appreciate that antitrust precedents and the "essential facilities" doctrine were developed in mature and competitive markets and have limited value in this context;

- Recognize that there are practical economic impediments associated with accessing realistic alternatives to unbundled network elements; and

- Be guided by the implications of the relationship between determining the "scope of availability" of alternatives to unbundled network elements and the implications of the "scope of denial" of those very elements to competitors.

Respectfully submitted,

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[28] 76 C.F.R. §905(b)(2)(i)-(ii).

[29] *Id.* at § 543(l)(1)(A). The Cable Act also defines "cable programming service. *Id.* at § 543(l)(2).

Appendix

Goals and Principles

The Vermont Public Service Board recognized the need to develop an unbundling policy in 1993, when, in an Order opening investigation into a filing by the New England Telephone & Telegraph Company ("NYNEX") of its Open Network Architecture ("ONA") tariff, this Board concluded, that "[i]n order to reap the benefits of competition and to promote diversity and innovation in the supply of telecommunications services (and telecommunications-based applications), competitors, enhanced service providers, and end-users must have equal and fair access to the public switched network and its manifold capabilities."[30]

As the investigation progressed, the Hearing Officer articulated the goals of unbundling in Vermont as "provid[ing] access, under reasonable terms and conditions, to useful parts of existing networks.[31]" This, they explained, "will permit new entrants to lease capabilities from the unbundled network owner and to provide competitive services."[32] However, in addition to noting that "network unbundling will lower entry barriers and promote efficiencies in the network," this Board also observed "that an initiative to unbundle the Vermont network should be taken for the benefit of ultimate consumers, rather than solely for the competitive advantage of market entrants."[33]

The Hearing Officer also articulated principles for network unbundling: "the objective of the unbundling effort will be to set forth network functions that are available on a tariffed basis at

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[30] Docket 5713 Order Opening Investigation, 2/18/94, at 6.

[31] 1996 WL 757165 (Vt. P.S.B., May 29, 1996) No. 5713 at 14. The Phase I investigation in Docket 5713 that sets out categories of unbundled elements was completed and signed by the Hearing Officer on February 8, 1996. The Hearing Officer's conclusions were affirmed by this Board on May 29, 1996.

[32] *Id.*

[33] *Id.*

rates that (1) promote economic efficiency,[34] (2) are not subsidized,[35] and (3) are non-discriminatory and without preferential terms for select carriers.[36]

After adopting the proposed goals and guiding principles, this Board agreed with the Hearing Officer's proposals and concluded that unbundling is only necessary for monopoly network elements.[37] Thus, the duty to unbundle fell to Bell Atlantic (then NYNEX) and Vermont's 14 independent LECs.

Bottleneck Facilities

During the course of the investigation, monopoly network elements were alternatively referred to as "bottleneck" or "essential" facilities. The Hearing Officer adopted the NYNEX-proposed definition for essential facilities, as follows: "(i) the input is essential to the supply of some other service; (ii) the service is exclusively supplied by the provider in question; and (iii) the provider and competitor compete with one another in the supply of some other service for which the service in question is an essential input."[38] This Board adopted the test for an essential monopoly or bottleneck facility for the purposes of determining the network elements that should be unbundled. Further, this Board agreed that the standard should be met throughout the service area of a given service provider, and that the standard of "exclusively supplied" should recognize the practical economic impediments associated with accessing realistic competitive alternatives.[39]

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[34] For purposes of promoting economic efficiency, the Hearing Officer concluded that "legitimate and verifiable cost-based differences among carriers may be reflected in wholesale prices so long as the drivers of those differences can not be captured through rate design." *Id.*

[35] The Hearing Officer also proposed an imputation standard: "the cost analysis of features and functions in the network should capture differences in costs in a manner that is consistent with cost drivers, and the tariff should reflect these differences. Such legitimate and verifiable differences in costs among competing carriers should, however, be identified and made explicit by analysis of costs in the total service long-run incremental cost — "TSLRIC" — study." *Id.*

[36] *Id.* at 16. "Non-discrimination" was defined by the Hearing Officer as "the availability of a function to all takers, timely notification of costs and availability of unbundled functions, timely provisioning and repair, prompt and comprehensive disclosure of network changes, use of standard interfaces, maintaining privacy of customer information, and imputation. *Id.*

[37] *Id.* at 17.

[38] *Id.*

[39] *Id.*

Categories of Elements

This Board concluded that at the outset, this obligation should extend to the categories of facilities and services identified below:

(1) Link: The link or end-user network connectivity includes basic network access, from customer premises to the home exchange switch or gateway to the network. The demarcation point between the link and other network functions is that which first acts on the input provided by the user.

(2) End-office switching: End-office switching provides cross-connection between user and inter-office transport facilities or other users for the creation of a call path. Each isolatable function within the end-office switching class may be available for unbundling. End-office switching is "distinct conceptually from non-switch functions such as Basic Service Elements."

(3) Inter-office Transport: Inter-office transport includes transmission functions between end offices or other trunk-side demarcations or between end-office switching to the tandem. The paths may be configured as switched or "dedicated" transport, or as a virtual dedicated hybrid.

(4) Tandem Switching: Tandem switching involves switched connection between a local network and an interexchange carrier ("IXC") network, and also between local networks. While the switch function does provide some network management functions, such functions could be considered distinct from switching and be grouped with other signaling functions.

(5) Signaling: Signaling provides network management and call processing functions independently of the switch. Signaling includes the following three elements of the network: Signaling Links that carry out-of-band signaling traffic between and among switches, signal transfer points, and signal control points; Signal Transfer Points ("STPs") that provide the function of connecting signal links; and Service Control Points ("SCP"s) that contain customer specific information and processes information requests.

(6) Ancillary Services: This is a general building-block category. At a minimum These include call completion, call assistance, directory assistance, and access to E-911 services, and operations support systems.[40]

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[40] *Id.* at 20-21.

Evidentiary Presumptions

In addition to adopting categories of unbundled elements, this Board adopted an evidentiary presumption that any category or service within the categories listed above constitutes an essential service.[41] However, the Hearing Officer recognized that there are aspects of telecommunications services in Vermont within these categories that either are or can be competitively provisioned and, therefore, are not essential services.[42] Such services, *i.e.*, those services that are no longer deemed "essential" in nature, and therefore are competitive, should not fall under an obligation for unbundling.[43] The Hearing Officer proposed that further effort would be necessary in defining the range of services within these broad categories that should be considered "essential" in nature. Incumbent LECs may petition this Board for a determination that a service no longer meets the standard of "monopoly facilities" as defined earlier. This Board agreed that the burden of proof for such a determination should rest with the incumbent.[44]

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[41] *Id.* at 21.

[42] *Id.*

[43] *Id.*

[44] *Id.* at 21 n.69.